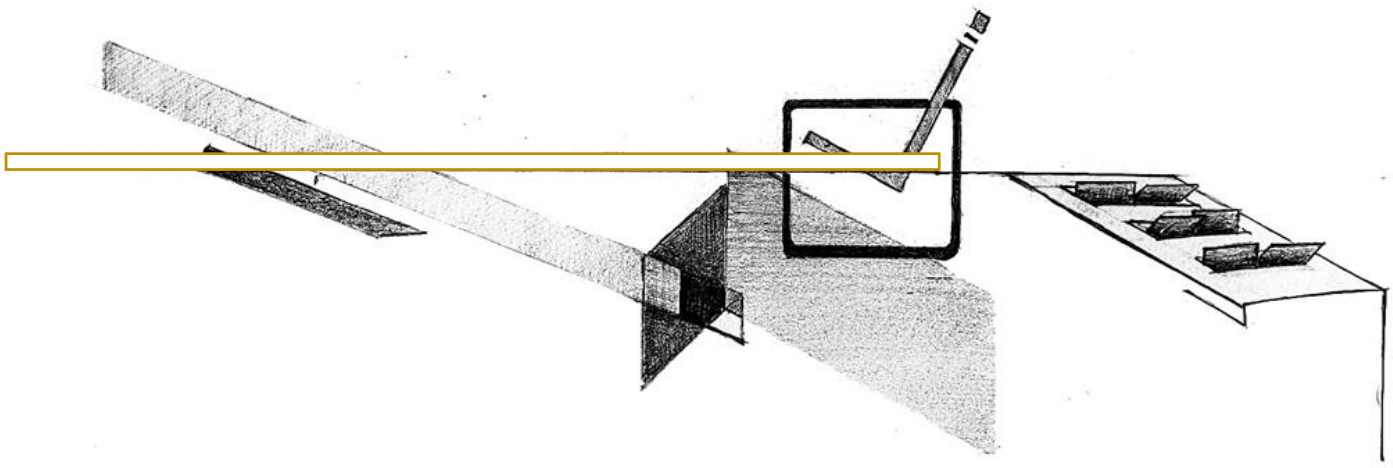
# The paradox of a modernist craftsman

*Marcel Breuer – the mass-produced craftsman masterpiece*



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## Abstract

Marcel Breuer is an iconic figure not only in the world of architecture but also in design. The interesting turn in his career and his professional journey from a craftsman to a designer and later to an architect gives a very good example of the important role of craft in architecture. The following paper analyses selected projects from the different periods of his career development. A red thread is defined through the years in terms of design approach and style. His work is analysed and used as a starting point on a discussion about the current architectural development. The paper offers interesting comparative analysis and conclusions about the place of art and craft in architecture nowadays and the existing paradox between it and the industrialization and mass production taking place.

**Key words**: craft, architecture, mass production, Bauhaus, Breuer, modernism

# Preface

*POEM*

*''Often you ask: where and how and what are AESTHETICS beyond functions needed?*

*Colors which you can hear with ears;*

*Sounds to see with eyes;*

*The void you touch with your elbow;*

*The taste of space on your tongue;*

*The fragrance of dimensions;*

*The juice of stone.''*

*– Marcel Breuer, October 5, 1951*

Vague and descriptive, defining and broadening at the same the is the ''first and only poem'' of Marcel Breuer with which he concludes one of his lectures as a Bauhaus professor held in October 1951 and dedicated to the Vassar cooperative house. He enters the role of a poet to explore the ''directions of aesthetics'' but without firmly defining them since ''a poet is forgiven for many more things than an architect''(Address at Dedication of the Vassar Cooperative House, October 5, 1951. – Marcel Breuer Digital Archive, n.d.). The poem points out on the movements celebrated at the Bauhaus alongside the arts and craft – functionalism. This already addresses some tension points between the approach towards the functional and the one of the mass-produced architectural element. Especially when the industrialisation that suggests that the construction and function are fully detached, in which the construction becomes a design principle and leads to production of non-specific spaces. (Pilsitz, Martin. (2013).

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# 1. Introduction

Looking back, the trend in architecture throughout history has continuously been crossing the line between craft and mass production. Craft has always been a vital part of architecture, and something incorporated in the architectural studies. However, the technique and traditions related to it are not the only factors influencing the development in the field. The specific social and economic situation are also dictating the course of the discipline. Because of which in this case, the industrialisation takes place. To explore the relation of the two ''opposites''- the uniquely crafted and commonly mass produced, some main definitions should be discussed.

## 1.1 Arts and Crafts movement and the rejection of mass production

A starting point would be the Arts and Crafts movement in England which itself emerged as an opposition to the industrialization and mass production during the 19th century. It took its name from the Arts and Crafts Exhibition Society (London), which was founded in 1887 but other groups were part of it as well. Some of them are the Arts Workers and the Exhibition Society (Graf, 2022).

There were many problems that architectural design faced during those times. The industrialization lead to deterioration in quality and aesthetics, the lack of unity, as well as a low status compared to the fine arts. The sense of beauty and decoration are, therefore, some of the things that Art and Crafts movement was trying to revive.

One of the big names, by whose theories the movement was inspired is the architect Augustus Pugin (1812–1852). According to him, even though ornamentation is a vital part of the design, it should have no unnecessary features that contribute nothing to construction or convenience. This is evidently stated also in his ''True principles of Pointed or Christian architecture'' where he identifies two main design rules – '' 1st that there should be no features about a building which are not necessary for convenience, construction, or propriety; 2nd, that all ornament should consist of enrichment of the essential construction of the building'' (Augustus Welnorthmore Pugin, 1853). This portraits decoration as an enrichment of the construction, as a part of the functional system of the building rather than something additional and solely aesthetic.

Another influential name in the context of the Arts and crafts movement is the designer William Morris (1834–1896) who also defends the idea that objects should be both useful and beautiful. His beliefs and passion for beauty is best mirrored in his words during one of his talks ''The beauty of life'' from the collection '' Hopes and fears for Art'' where he states: 'Have nothing in your houses that you do not know to be useful or believe to be beautiful '(William Morris – Hopes and Fears for Art, n.d.). He stresses on the importance of art's presence in our home but also its place in Architecture. This term he believes to represent a compilation of all arts but also to have ''simplicity and solidity'' as two main principles (William Morris – Hopes and Fears for Art, n.d.). It is interesting that he addresses another very relevant topic – money. Since art requires time, skills and materials it also raises the costs of the house. This is why he promotes the elimination of unnecessary luxuries and the demand of real comforts which will allow people to afford and live in decent houses. This approach aligns also with his take on the fact that ''the greatest foe of art is luxury'' (William Morris – Hopes and Fears for Art, n.d.). This follows the thought of simplicity as a key approach towards art, life, and architecture.

Following with John Ruskin who is another key figure of the Arts and Crafts movement. He is a philosopher and art critic who believed Ruskin believed that the design process and the process of realisation of the idea are tightly connected and that it is vital to gain an ''understanding of the thing actually to be done'' in order to avoid failure (Ruskin,1880). Along with this he was also a critique on mechanisation.

Characteristic for the Arts and Crafts movement is also the critique of mechanisation. As mentioned, a negative view of machinery and the consequence of the industrial revolution sits in the core of the movement. What was criticised was the "soullessness" of the machines and wanted to revive the relationship between production and creative craftsmanship. A good example of this relationship is the Medieval period. The skills of the craftsman were incorporated into the design process from the very start. Furthermore, work in smaller workshops was preferred over the large factories production processes (Graf, 2022).

Another yet important view was the emphasis on creating a harmonious interior. It was vital that the design of the building on the outside, its interior and all the objects in it fit in together and collaborate to create a unified design (Graf, 2022). This makes logical the fact that the designer has been seen as someone involved in more than one discipline and would, for example, design furniture as well as textiles. This is already an approach clearly visible also in the Bauhaus studies later on.

### 1.2 Modernism and how did it evolve from the craftsman movement

An architectural movement which is tightly connected to the paradox of craftsmanship and mass production is also Modernism.

The movement of 20$^{th}$ century is related to freedom, experimentation but also rationalism and structural approach towards architecture. The idea of simplicity and neat design substituted the importance of ornamentation(RIBA, 2019). Minimal design and asymmetry and attention to volume in the design process makes it evident that Modernism and Arts and Crafts movement are quite different in terms of approaches towards architecture.

### 1.3 Comparison between the two movements – Arts and Crafts and Modernism

Arts and crafts followers believed that in an era of growing industrialization, art and design were being divorced from regular workers and craftspeople. The movement emphasized handicrafts and the ideals of common laborers, in particular the use of local materials to construct a building and favoured organicism and asymmetry of design. It promoted a concept of design where a building is contextualized in its environment and location and is built with the site in mind. These ideas could be seen also in the philosophies of many modern architects which leads to seeing the Arts and Crafts movement as a prosecutor of the modern designs of 20th century.

It should be noted how the architect role as an artist and a craftsman has changed through time. From the industrialization through the art and craft and leading to the created 'modernist craftsman'.

The past idea and role of craft in architecture could be explored through Marcel Breuer's ''furniture inventions'' and architectural accomplishments. His career represents an interesting example of how a craftsman intuition could grow into an architectural vision. In this context, Marcel Breuer is seen as firstly a furniture and interior designer influenced by the Bauhaus principles whose passion later develops in residential and institutional architecture with a significantly different design aesthetic.

Alongside the analysis few key questions are investigated such as:

*What is the role of craftsmanship in architectural development?*
*How does craftsmanship fit in today's mass production industry?*

The paper intends to depict the laying paradox between the craftsmanship in architecture and the modernised mass industry by putting Breuer's work in the middle. It starts with the importance of art and craft and its influence on the designer's approach in the field of architecture.

The research aims to find the correlations between the different periods of Breuer's career and through that to examine the evolution of craftsmanship in his work and its relation to the economic situation. This leads to useful conclusions about the influence of today's mass production on design and suggest future possible direction of the modern architectural development.

### 1.4 Subject relevance nowadays

It is important to note that the analysed paradox has been relevant before and it is relevant now. The history is repeating and in order to expect a different outcome we have to be aware of it and learn from it.

It could be said that the industrialization which ''brings'' all the machinery in people's life in order to make it easier but in the same time takes away their jobs. Similarly, nowadays, in the era of technology, there are even newer devices and methods of doing things, many of which also do not include the man in the production process. Furthermore, during the Arts and Crafts movement the beauty and aesthetics as well as functionality and simplicity are put on a pedestal. The same way today, the uniqueness, hand crafted and enriched by the tradition has become more and more valuable and expensive but not yet commonly pursued. In both cases the reason to go further away of tradition, craft and decoration is that the mass production is more cost and time efficient process.

## 2. Structure and Methodology

In pursuing the answers of the mentioned paradox and the relevant to it questions, a number of selected projects and designs done by Breuer are analysed. They are representative for three different themes according to the stage in his career and his interests. Firstly, a throughout analysis is done on Bauhaus school, its principles – where the name of Marcel Breuer was ''born'', then his approach towards furniture design is analysed, followed by residential and institutional architecture. The projects are namely: the Wassily chair, the Geller I House and UNESCO Quarters in Paris. As a primary source Breuer's digital archive is used. This will be accompanied by literature review and also exploration of magazines relevant publications. At the end, a comparative analysis of Breuer's works is done and it is referred to the current architectural tendencies.

## 3. Bauhaus as an Example – 1919 – 1933

The Bauhaus school is tightly related to the first steps of Breuer as an architect and has been influential for his primary development as a designer.

Starting off with a general introduction of the Bauhaus school of design it could be said that it was established in 1919 by Walter Gropius in Weimar, Germany (Sudjic 2014). It started as a school for art and design but soon in order to fit the economic environment at the time it had to shift towards industrial production (The Bauhaus: Marcel Breuer (Article), n.d.). Even though it existed for only fourteen years, it was considered the home of the Avant guard art movement. The radicality present in its nature is noticeable also in Bauhaus philosophy of combining the functional and aesthetic aspects of architecture or furniture design. The innovative way of approaching design has been even considered unusual and rather shocking in 1920s. However, it is the practicality of the furniture pieces that makes them appreciated and seen as ''beautiful'' later on. The philosophy to prioritise 'people's needs instead of luxury needs'' (Saletnik & Schuldenfrei 2013) is reflected in the design approach where the user becomes the focus. However: ''It is a mistake to believe

that the modern movement is guided solely by functionality and not by beauty. The opposite is the case.'' (Baumann, 2007) is stated by the founder of the school. This means that aesthetics is not completely disregarded but rather perceived through the idea that something is beautiful because both its appearance and way of use contribute to its beauty and are essential for it to accomplish its purpose.

This leads to the manifesto of Bauhaus. One of the leading ideas in the school is the one of the unity between art and craft. The artist and the craftsman are not seen as two separate roles but rather perceived as one whole. The aim of Bauhaus is to bring the disciplines together into one ultimate ''work of art – the great structure'' (Ulrich Conrads, p.50 (Ed.)) creating a community of architects, sculptors, painters, masters of the craft. This ideology is also where the principles of the school stem from.

According to the Bauhaus, craftsmanship should be thought and learned to precision; therefore, the students dive into the production process of the art. Trainings and workshops are organized for the students to master materials, construction, expression, and practicality. ''Every student must learn a craft'' (Ulrich Conrads, p.52 (Ed.)) along with trainings in drawing, painting (Ulrich Conrads, p.50 (Ed.)), science and theory *(Fig 1).*

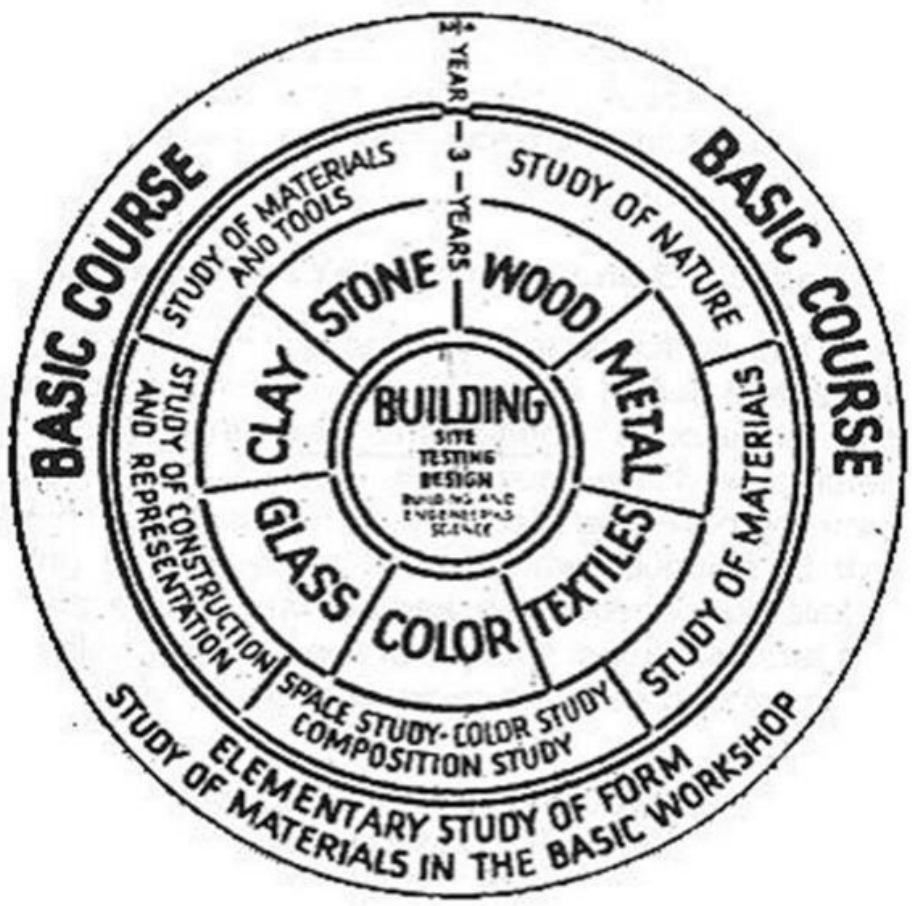


*Fig 1. Organization of the Weimar Bauhaus School*

*(Burkay Pasin (2017)*

An even more detailed overview accompanied by a timeline and information about the professors leading the different workshops can be seen in Appendix I. Big names such as Walter Gropius, Johannes Itten, Hannes Mayer, Mies van der Rohe along which also the name of Marcel Brauer could be seen who has lead the Furniture workshop together with Heinrich Bokenheide from 1925 to 1928 (Cowper et al., 2019). It is non the less an honour and recognition of one's abilities as a designer to be chosen to lead a class in the Bauhaus. It is also a good indicator of fully embracing and understanding of the design approach of the school.

### 3.1 The Bauhaus building in Dessau – 1925

All of those principles and design philosophy is reflected not only in the study program but can be seen in the architecture of the building of the school itself – the Bauhaus building in Dessau.

The Bauhaus school moved to Dessau from Weimar in 1925. The new building along with the housing complex accommodating the students is design by the school's first director Walter Gropius. The building is an ''exclamation mark of modernism'' (Florian Strob et al., 2019). Rather simplistic in design it is composed out of multiple building volumes accommodating different function which are connected. The circulation of the building unites it and movement becomes the key to its full experience. When it comes to the program, the school offers exhibition spaces, auditorium, canteen, studio and workshop spaces, balconies etc. All of this combined in one almost what is today called ''campus'' *(Fig 2).*

*Fig 2. Bauhaus building Dessau,*

*(Werkstattgebäude Mit Verbindungsgang – Marcel Breuer Digital Archive, n.d.)*

*Fig 3. Luna building TU/e campus, Eindhoven*

*(diederendirrix, n.d.)*

It is curious to see how the design approach towards the Bauhaus building is still applied into the design of the university campus. A good example for that is the campus of the Eindhoven University of Technology where the different buildings are connected via covered bridges *(Fig 3)* and can be reached through inside spaces without having to exit a building. Thanks to this the faculties all are a part of one unified system.

Continuing with Bauhaus, it could be stated that the Dessau building embodies perfectly the motto Gropius has for the Bauhathis,''Art and Technology – A New unity'' (Florian Strob et al., 2019). A good example for that is the principle used to design the building also on the inside. On the places where usually art is displayed and paintings are hung on, there is technology visible, ''technology is displayed wherever technology would have been depicted in a painting'' (Florian Strob et al., 2019) (Fig…). For, example, a radiator is put where a picture of a radiator would typically be situated (*Fig 4).* This blurs the line between art and technology and how they are perceived even more.

*Fig 4. The radiator, a work of art*

*(Bauhaus Radiatorji – Discountsonline.outletsales2023.Com, n.d.)*

Another important feature of the building is the use of glass a construction material. The created transparency and also the layout of the building create the effect that visitors experience the outside of the building by looking at it from the inside, a reflective observation *(Fig 5)*.

*Fig 5. Reflective observation*

*(Werkstattgebäude Hofseite – Marcel Breuer Digital Archive, n.d.)*

The interior of the building was also specifically designed. Different parts of it were assigned to students, where Breuer was handling the design of the auditorium tubular seating and the seating and tables in the canteen. The colour scheme of Hinnerk Scheper was used. These colours became quite detrimental for the Bauhaus appearance but also they created a sense of dynamic.

It is here important to note also the Bauhaus take on functionalism. It doesn't completely deny the sensuality that should be present in a building's design. That is evident in the design of the architectural elements and

how they trigger the senses. The sound of the closing doors, the smell of the different floorings, the amount of light in the different parts of the Dessau school defined the character of the different spaces depending on their function (Florian Strob et al., 2019).

This view on functionalism is evident also in one of Bruer's lectures given in 1923 about form and function where he denies Sullivan's slogan ''Form follows function'', by stating that this is not always the case (Address at Dedication of the Vassar Cooperative House, October 5, 1951. – Marcel Breuer Digital Archive, n.d.). Approaching a building design directly through its programme according to Breuer is not promising a good building at the end but is at least a way to meet the base requirements. His view on functionalism is also displayed in the poem displayed in the beginning of the paper (p.2).

## 4. Marcel Breuer at the Bauhaus

One student, Marcel Breuer, who later becomes also a professor in the Bauhaus school, stands out. The history of the school and change of its philosophy could be explored through his furniture designs.

### 4.1 The Wooden Armchair as a clear expression of craftsmanship

Starting with the Wooden armchair designed in the weaving workshops during Breuer's first years in the Bauhaus. The use of stained oak and hand-woven wool presents not only the incorporated craftsmanship but also creates and interesting interplay between rigidness and softness, geometrical abstraction, and fabric flexibility *(Fig.6).*

It is a highly expressive and with a very structural composition it aligns with the design principles De Stijl movement which brings another view on design in the Bauhaus school.

*Fig 6. Wooden armchair*

*(Slatted Chair Ti 1a, n.d.)*

### 4.2 De Stijl influence in the design principles in the school of Bauhaus

A major change in approach in Bauhaus is brought by Theo van Doesburg, the co-founder of De Stijl (1921). The school is separated in two leading ideologies. Some of the main characteristics of De Stijl's approach are that ''art and life are no longer separate''. Therefore, we should construct our life, following the ''creative laws derived from a fixed principle''. In the core of De Stijl's ideology stands ''purity'' and ''unity of the arts'' Architecture is seen a product of the flawless collaboration between the architect, the painter, the sculptor (Ulrich Conrads, p.67 (Ed.)). This unification of disciplines is a common approach with the Bauhaus approach until now however, De Stijl brings also another view. The idea of architecture as ''a plastic unit'' which is tightly related to the industry and technology leads to a new style where the focus is directed not towards the individual but the universal instead (Ulrich Conrads, p.39 (Ed.)). This tension breaks the Bauhaus school in two thought ideologies between Van Doesburg and Itten. It also shows the tendency towards industrialization and manufacturing in design and its incompatibility with the idea of the unique, individualistic masterpiece.

## 4.3 The Bauhaus furniture – design principles, the iconic Wassily chair and what makes it revolutionary

### 4.3.1 The Bauhaus furniture

Before diving into the design of the famous Wassily chair a context of the Bauhaus approach towards furniture design would be given. A publication in ''Offzett'' magazine (Form Funktion, Offrett Magazine – Marcel Breuer Digital Archive, n.d.) of the lecture on Form Function given by Breuer (Form Function – Marcel Breuer Digital Archive, n.d.) and later published in 1925 give a clear outline of the design principles of the school regarding furniture.

One of the focus points of the design approach, as mentioned in the magazine, goes back to one of the fundamental principles of the Bauhaus school – the unity between different disciplines. The art and technology should be collaborating concepts, reinforcing each other into creating one whole. As mentioned, ''the essence of the artist is that he works with the highest degree of sensitivity. The essence of the technician is that he works with the highest degree of logic''. Even though art and technology are different and usually exist independently, they do collaborate in the spere of construction. And in order for that to happen the artist should be also a technician: ''The art is great, the technique is great, the two together are twice as great'' (Form Function – Marcel Breuer Digital Archive, n.d.). The design of a product lies in the collaboration between art and technique but the reason for the idea to be born in the first place is the necessity. It is the absence of something in the daily lives of people, something which would satisfy certain needs. This leads to the importance of the relation between the form and the function of a design. Accordingly, every piece of furniture has an appearance dictated by the function it utilizes (Form Function – Marcel Breuer Digital Archive, n.d.). In the lecture, this line of thought continues. It focuses on the definition of the style of Bauhaus. It specifies that the form does not define it, such as in other architectural styles such as Gothic, Baroque, Renaissance. Bauhaus stylistic approach is related but not defined by a motif either. The motif is seen as something which realises the relation between the different elements and helps achieve the desired unified design. It is a ''principle of construction''. However, the main concern in furniture design is not the motif, but the function. Breuer explains: ''When we form objects so that they function correctly and do not interfere with each other in their functions, there is no more to be done.'' (Form Function – Marcel Breuer Digital Archive, n.d.). This shows that in the design process, both construction and appearance are seen as a result of a function.

### 4.3.2 The Wassily chair – 1925

Following that, a very good example of this design principle is Breuer's revolutionary Wassily chair. The piece was designed with the idea to create a better seating than what has been available on the market. Stretched fabric on the structure of the chair is used for the surfaces. It elasticity provides better comfort since it adapts and follows the shape of the body. The use of fabric can be recognised also in the design of the Wooden armchair discussed previously. Therefore, it could be said that the revolutionary nature of the Wassily chair, is not thanks to the fabric but the metal tube frame used to construct it *(Fig. 7)*. It was then the first time this material has been used in furniture design and it has given the start of the metal furniture system design.

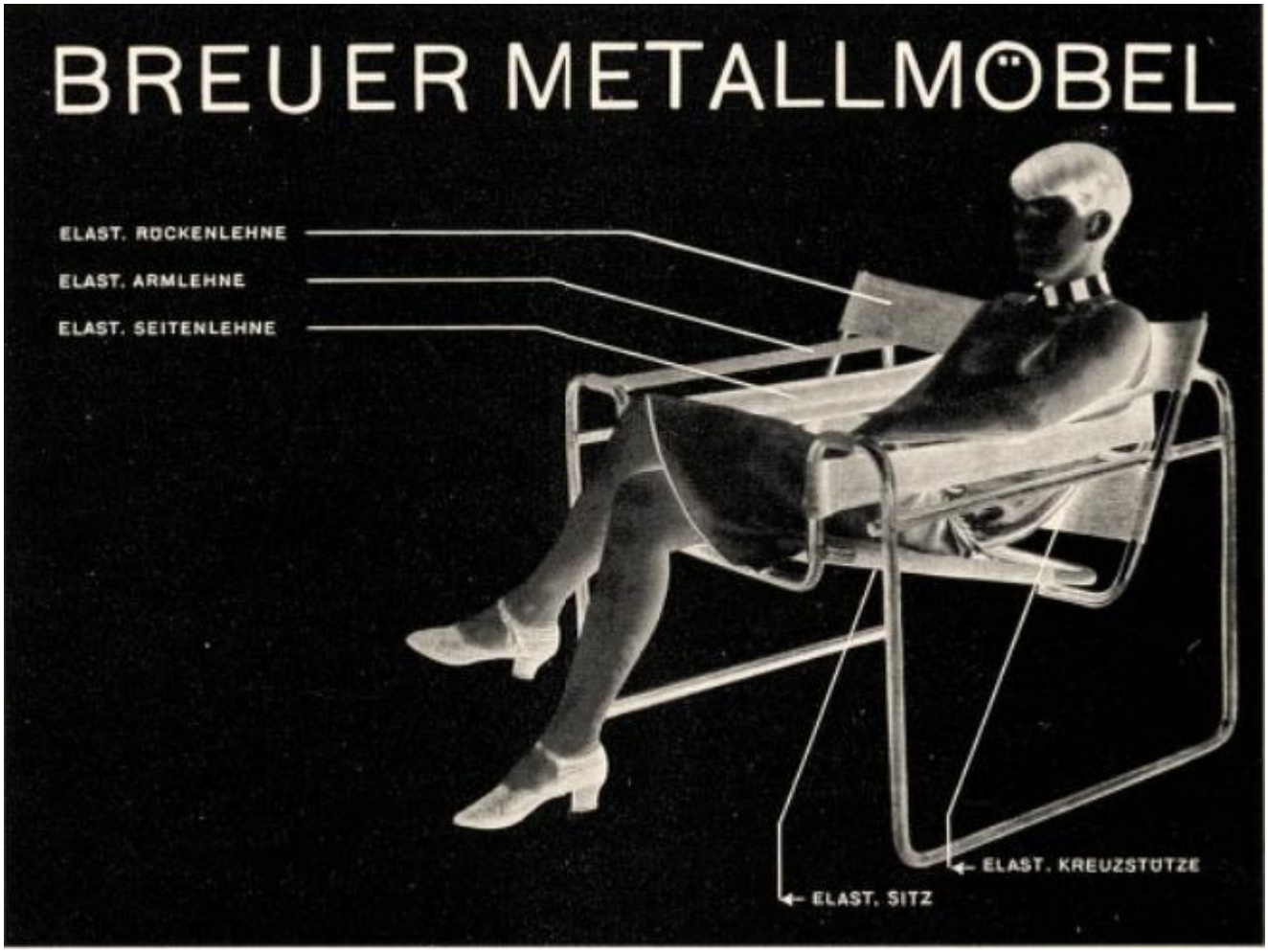


*Fig 7. Tubular metal furniture, The Wassily chair*

*(Breuer Metallmöbel – Marcel Breuer Digital Archive, n.d.)*

The steel frame makes the chair lighter, cheaper and more durable. A steel lounge chair for example, would be around for times lighter than a typical one. Furthermore, the steel tube is also stronger than any other material used for seating furniture. This durability makes Breuer's furniture around 200% more economical than the rest. Nevertheless, the design is light, easy to clean but also easy to transport. It could be disassembled, reassembled and the parts could be replaced if needed (Breuer Metallmöbel – Marcel Breuer Digital Archive, n.d.). All of those aspects outline the beauty of the chair since the design tackles not only the problems of aesthetics but also comfort and affordability.

## 5. The Geller House I – 1944 –a new approach towards the American home

After the design of the Wassily chair, many more furniture pieces followed including also tables and tea-carts, all designed and realised in mass-production. Breuer's career took off, the beauty of the design and a good publicity resulted in a flying start. It is soon after that Lajko (how friends called Breuer) started performing as an interior design for people of the avant-garde such as the theatrical producer Erwin Piscator (Gatje, 2000p.17). During that time, there was a scarcity for work in the architecture field. Therefore, the niche in interior design in which Breuer and his manufacturer – Thonet Brothers were working, was beneficial (Gatje, 2000p.17). However, Breuer's ambition pushes him to pursue an architectural career and in 1928 he started working towards opening his own architectural office in Berlin. In 1932 he got his first project for a house, and many followed after that. With time Breuer also established his way of working on design. He has been ''an intuitive designer'' as Gatje describes him, ''The conceptual phase of the design has been fast. He has then been spending more time of working out further the details''(Gatje, 2000, p.25). This

clearly shows Breuer's approach as a designer but also attention to detail and the art of construction typical for the craftsman.

One of the numerous projects throughout the years stands out and this is the Geller House I commissioned in 1944 by Bertram and Phyllis Geller (Marcel Breuer Digital Archive, n.d.) *(Fig8.).* The man was a shoe manufacturer in Lawrence, New York and both him and his wife were big fans of Breuer's work. The architect designed both exterior and interior of the house and worked out every last detail. However, was disappointed to see that one year after the family still has not used their home (Gatje, 2000, p.27).

*Fig 8. Geller House I*

*(Geller House, Lawrence, L.I. 1944-45 - Marcel Breuer Digital Archive, n.d.)*

In its essence some of the main things that make the house special are the ''binuclear'' organisation and the butterfly roof. The plan of the house was not designed following the idea of the typical home, but rather designed for the specific family and their needs. On one hand, the Gellers wanted a house centralized enough to ''avoid excessive footsteps'' and ''stairclimbing'' (Geller House, Lawrence, Long Island. Designed by Marcel Breuer, Architect. - Marcel Breuer Digital Archive, n.d.). On the other, both the children and parents should have their privacy. In this way the kids would have their space to grow but are still sufficiently supervised, and the parents would have their place away from the children to manage as they please so the kids can play undisturbed. Therefore, the one-floor house had the bedroom and children area are separated from the common living area via hallway and a porch. This results in a plan with two focal points *(Fig. 9).*

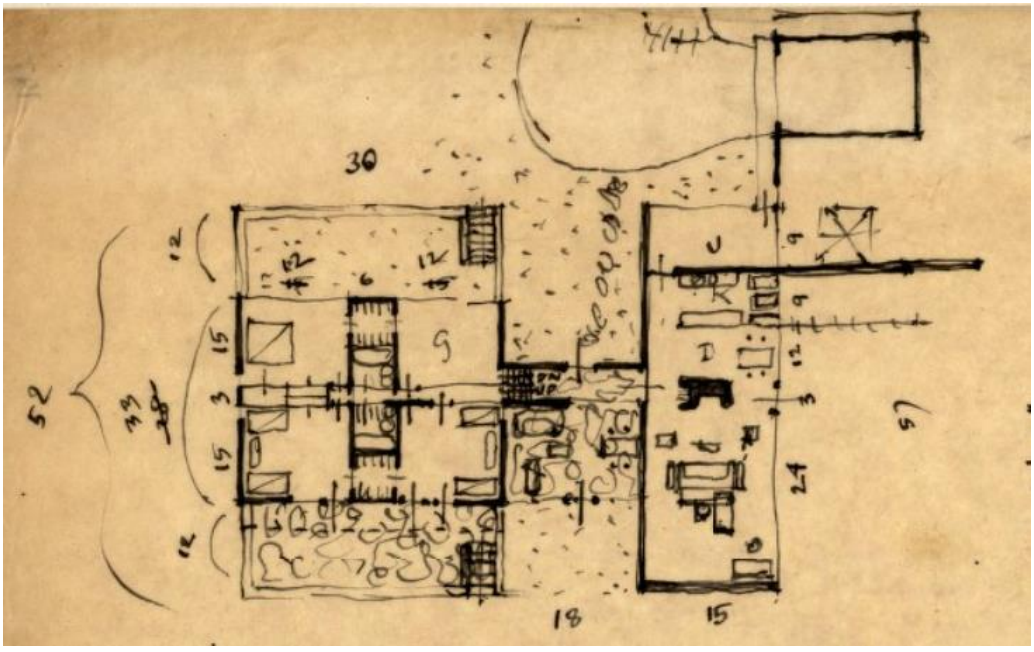


*Fig 9. Geller House floorplan sketch*

*(Sketch No. 183 – Marcel Breuer Digital Archive, n.d.)*

On the sketch displayed above the divided character of the house is already visible. The concept of the design during the thought process is even more evident since in there is a complete division between the children and parents' area whereas in the final floorplan *(Fig. 10)* an additional open area for the kids smoothly breaks the direct division of the house.

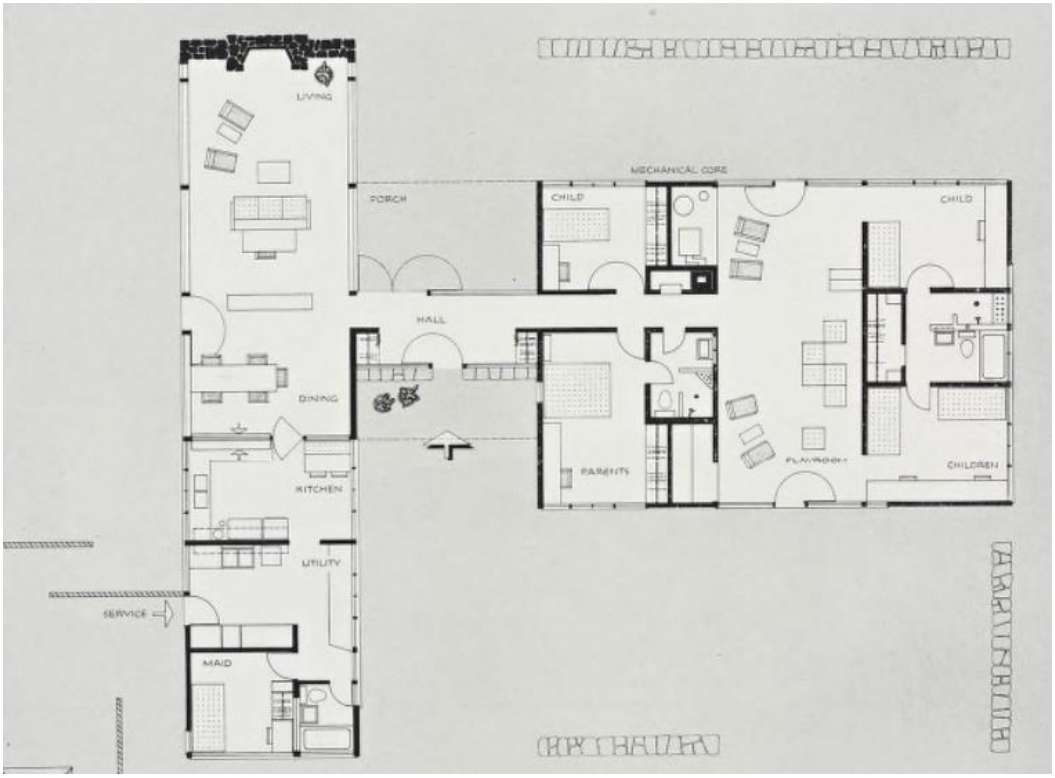


*Fig 10. A part of the Geller House final floorplan showing the division od the main areas*

*(Geller House, Lawrence, Long Island. Designed by Marcel Breuer, Architect. – Marcel Breuer Digital Archive, n.d.)*

Since this was the first residential project with a binuclear design, its uniqueness called for some criticism. By some the house was not perceived as ''homelike'' because the composition does not imply compactness and cosiness. That was not the case when it comes to the client of the project. Very genuine is the comment of Mrs Geller for the opinion of the children: 'The kids are quite at home here. They're really very happy here; they like the house, especially its freedom.'' The satisfaction of the family proves that the house is designed specifically for them and does not necessarily have to fit into the stereotypical residential approach, but rather set a new one.

As mentioned, another special feature of the house is its inclined roof. Two roof slopes are created toward the central part of the house. This affects the amount of daylight coming in the dining room, but it is also giving the opportunity for an efficient drainage system whilst also making a pure statement of presence in terms of architectural expression (Geller House, Lawrence, Long Island. Designed by Marcel Breuer, Architect. – Marcel Breuer Digital Archive, n.d.). Furthermore, the flat roof is special also in its technicality. It was one of *Barret Specification roofs* which were considered new and quite modern in the materials that they use at the time (Advertisement for the Barrett Division Featuring the Geller House – Marcel Breuer Digital Archive, n.d.). A whole advertisement of *The Barret Division* (Appendix II) is made about using this type of roof in the construction of the Geller House I which increases the popularity of the project even further. It sets it as an innovative project not only in terms of organizational principle but also in technical solutions.

It is evident that Marcel Breuer paid special attention to details, and this could be seen also in the materiality of the house.

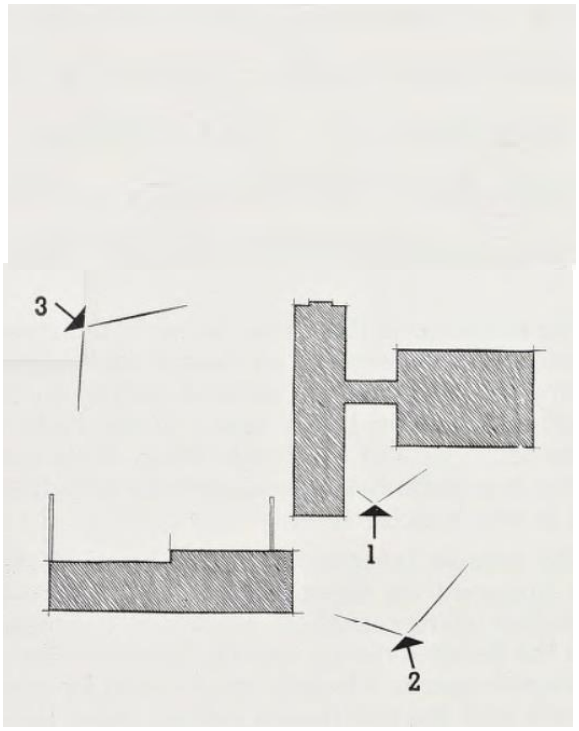


*Fig 11. Viewpoints, pictures of the Geller House (Geller House, Lawrence, Long Island. Designed by Marcel Breuer, Architect. – Marcel Breuer Digital Archive, n.d.)*

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*Fig 12. Viewpoint 1, Entrance of the house (Geller House, Lawrence, Long Island. Designed by Marcel Breuer, Architect. – Marcel Breuer Digital Archive, n.d.)*

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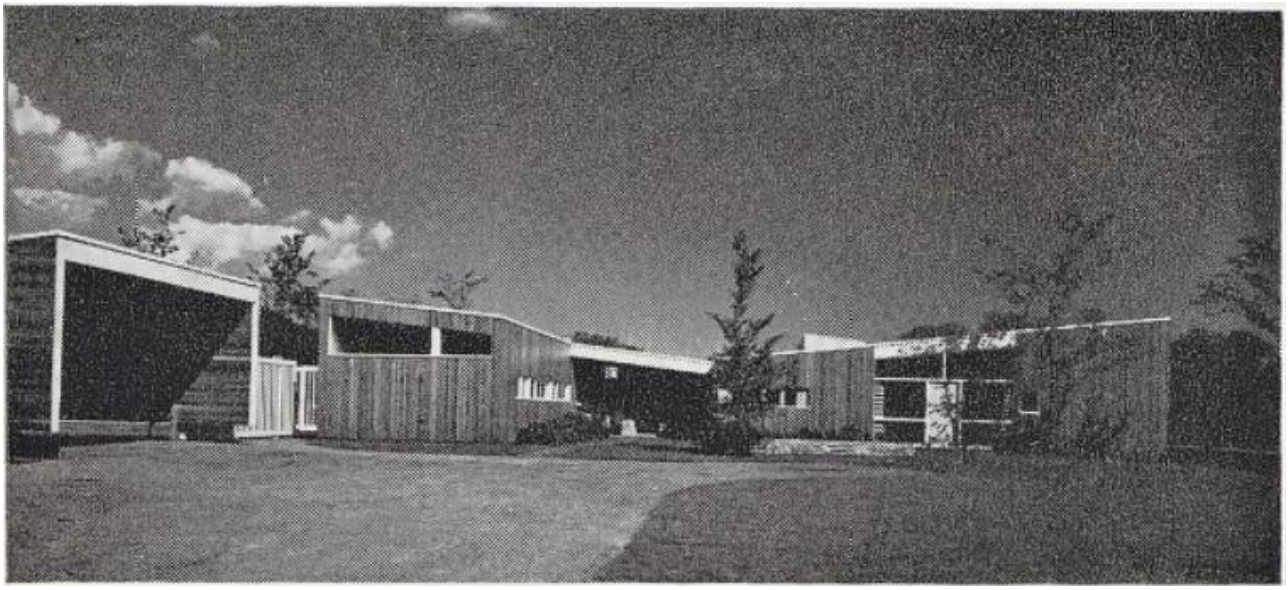


*Fig 13. Viewpoint 2, Façade materiality*

*(Geller House, Lawrence, Long Island. Designed by Marcel Breuer, Architect. – Marcel Breuer Digital Archive, n.d.)*

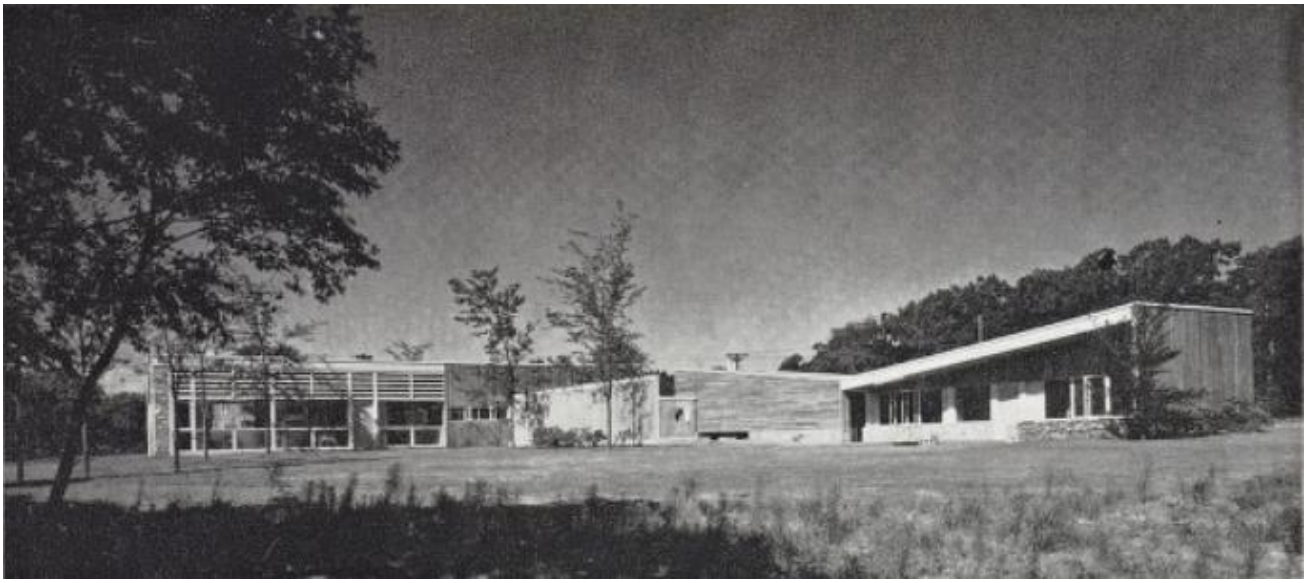
3. 

*Fig 14. Viewpoint 3, Greenery*

*(Geller House, Lawrence, Long Island. Designed by Marcel Breuer, Architect. – Marcel Breuer Digital Archive, n.d.)*

Landscape materials are used with the idea of achieving a natural appearance which, conveniently for the clients, requires less maintenance. Rather than creating a patchwork of different materials they are kept ''as homogenous as possible'' (Geller House, Lawrence, Long Island. Designed by Marcel Breuer, Architect. – Marcel Breuer Digital Archive, n.d.) *(Fig 12,13).* This resulted in a clean and elegant façade design. Both aesthetics and practicality are integrated in the material choice for the project.

Furthermore, copper breeches, elm trees and flowering shrubs are planted in order to provide the necessary shade and colouring of the cite throughout the seasons (Geller House, Lawrence, Long Island. Designed by Marcel Breuer, Architect. – Marcel Breuer Digital Archive, n.d.) *(Fig 14).* With this use of greenery Breuer takes the integration of the house in the surrounding area a step further.

What really connects the house to the environment and the outside to the inside, however, is the penetration of light. It is the openness of the house. The continuous roof enables the use of big glass windows welcoming the daylight into the interior creating a seamless flow through the spaces *(Fig 15.).* Looking into the construction of the façade, different elements are used to provide both scattered light and privacy such as translucent strips and louvers.

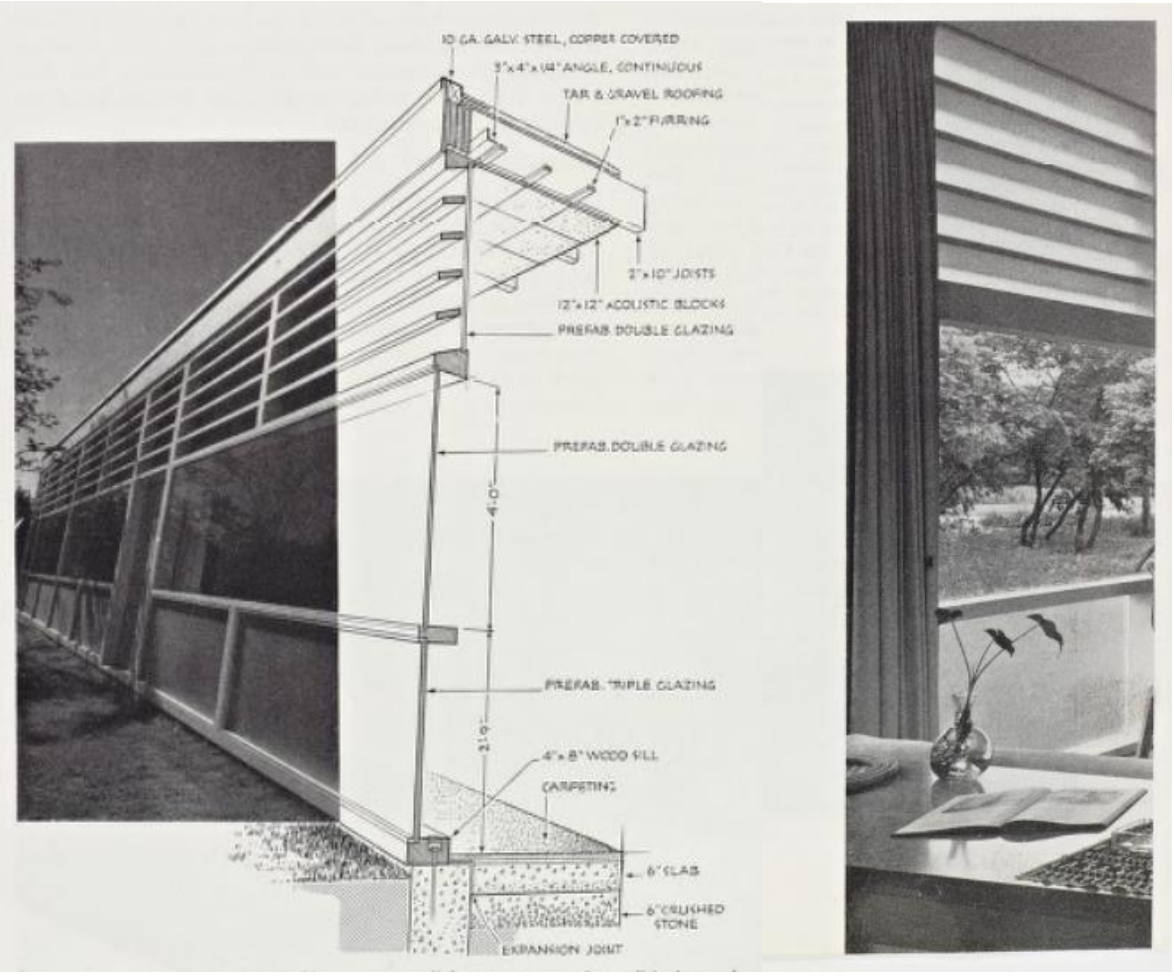



*Fig 15. Combination detail drawing and photographs featuring the exterior, interior and the façade section*

*(Geller House, Lawrence, Long Island. Designed by Marcel Breuer, Architect. – Marcel Breuer Digital Archive, n.d.)*

The continuous interplay between technical and aesthetical solutions is exceptional and one of the features that makes this house design stand out. Only three years after the house is commissioned it has already been recognised as something revolutionary. Not the specific design solution, but it was the principle of division and concept of organization that has made this project unique. As ''predicted'' by Progressive Architecture in their publishing about the house in February 1947 '' It is the method of solution rather than the specific answer that may be imitated''(Geller House, Lawrence, Long Island. Designed by Marcel Breuer, Architect. – Marcel Breuer Digital Archive, n.d.). Therefore, it could be said that a radical new type of American housing born.

## 6. UNESCO Headquarters in Paris – 1953

The next project to be examined is way bigger in terms of scale and design process, it is the UNESCO Headquarters in Paris.

After the rejection of Eugène Beaudouin's idea in 1952, the project is assigned to ''The Three''. The leading design group consisted of two architects, namely – Breuer and Bernard Zehrfuss and one structural engineer – Pier Luigi Nervi (Appendix C). It is curious to point out this collaboration between architects and engineers since it really shows the modern idea of collaboration of different disciplines which is also followed in Bauhaus. Furthermore, the P.L. Nervi specializes in concrete reinforced structures (Site for UNESCO Headquarters Architects Appointed - Marcel Breuer Digital Archive, n.d.). This aligns with the tendency of using concrete in the built environment during the 20th century. It could be even said that this is the material of modernity. Its aesthetic qualities, structural properties and the design freedom that it offers made it a very suitable material to work with and satisfy the ambitions of both architects, builders and engineers.

Going back to the project, the leading designers were helped by a consultant - Eero Saarinen, and a group of advisors lead by W.Gropius. The group was also known as ''The Five'', the members of which were Le Corbusier, Lucio Costa, Sven Markelius, and Ernesto Rogers (Marcel Breuer Digital Archive, n.d.). The number of people involved in the project and the selection process definitely shows its importance.

The first design idea which Breuer and his colleagues propose is of three buildings aligned next to Porte Maillot (Marcel Breuer Digital Archive, n.d.) *(Fig 16.)*. From all of the building volumes the one of the Secretariat stands out. It is way taller and built on V-shaped concrete columns, a design element which appears also in the upcoming design proposal.

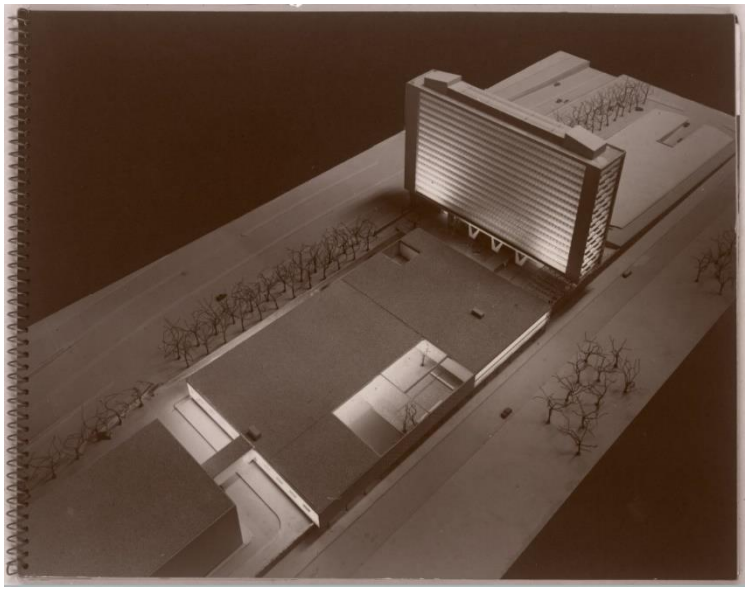


*Fig 16. Model of the first design proposal from ''The Three'' - Maillot*

*(Marcel Breuer Digital Archive, n.d.)*

This design was not approved for several reasons, one of which is the site location and the fact that the Secretariat even blocked views towards Arc de Triomphe (Marcel Breuer Digital Archive, n.d.). Another design proposal was requested.

The final building proposal was approved by the General Assembly on July 1, 1953. It had the Secretariat building as a central statement *(Fig 17.)*.

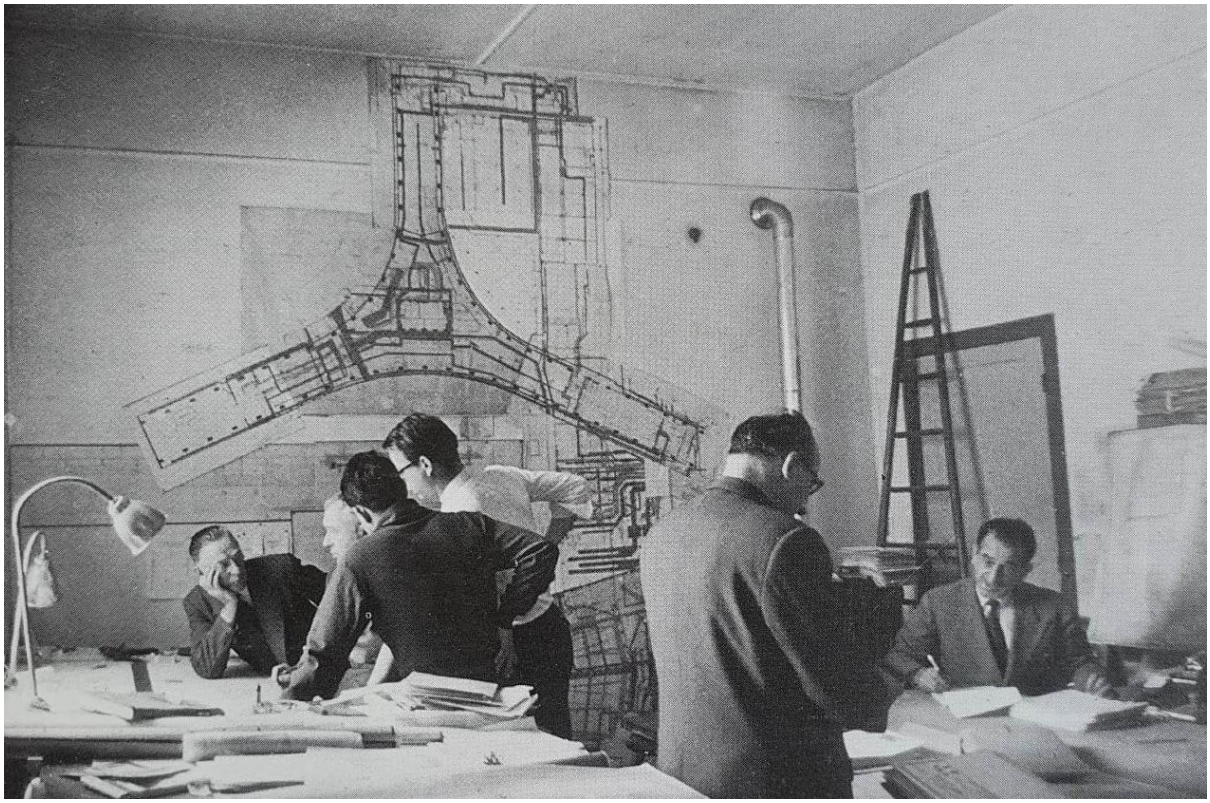


*Fig 17. UNESCO drafting room in Paris*

*(Gatje, 2000, p 46)*

The whole complex consisted out of three buildings – one used for delegations, the Secretariat and the Conference Hall *(Fig 18)*.

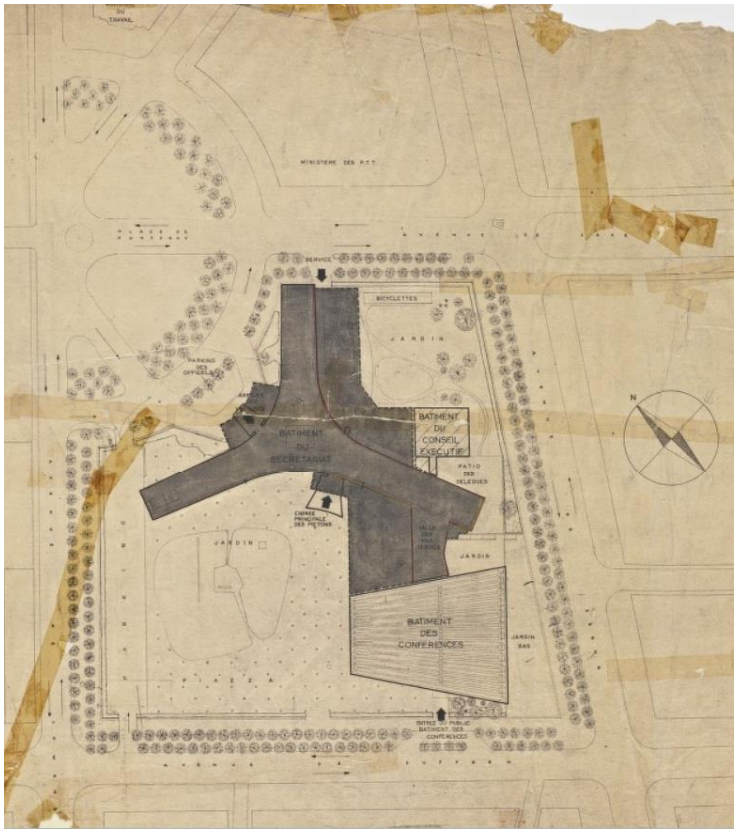



*Fig 18. Construction set, architectural drawing of the complex*

*(Construction Set: Architectural – Marcel Breuer Digital Archive, n.d.)*

## 6.1 The buildings of the complex – Delegations building, Secretariat, Conference Hall

Firstly, the building hosting the delegations is concrete building with glazed stories. As mentioned by Isabelle Hyman, it was inspired by the earlier Maillot design of the Headquarters because of its similarity to the tower (Marcel Breuer Digital Archive, n.d.). Because of this improvement of the previous design someone could suggest that this building acted as a starting point for the new design of the complex.

Secondly the Secretariat *(Fig 19)* is the building with the biggest volume. It stands out because of number of features, one of which is its unique shape. Other are the massiveness of its structural elements such as the pilotis supporting the construction and the more elaborated sunshade mechanisms of the curved facades. Furthermore, the building acts as a continuation of the semi-circular Palace de Fontenoy (Marcel Breuer Digital Archive, n.d.). This assures a very good urban integration of the building since it follows the already existing fabric of the city.

*Fig 19. Perspective drawing – Secretariat and Conference hall*

*(Perspective Rendering – Marcel Breuer Digital Archive, n.d.)*

The third building of the complex is the Conference building. Its design catches the attention. The folded concrete shell of the building definitely make it a bold architectural statement. Exquisite are not only the walls but also the roof and the connection of the two showed in Fig 20.

*Fig. 20 Conference building, wall-roof connection*

*(Aspen Health Center: Detail of Walls and Roof – Marcel Breuer Digital Archive, n.d.)*

### 6.2 Paintings and Sculptures incorporated in the design of the buildings and the green area of the complex

Inevitable is the presence of art in the project. Sculptures and paintings played a very important role in the design process of both buildings and the piazza of the complex. After careful selection, artists such as Pablo Picasso, Joan Miró , Jean Arp etc. designed wall artworks, garden with sculptures, murals I order to achieve the desired incorporation of art (Marcel Breuer Digital Archive, n.d.). This comes as no surprise since even the entrance canopy of the Secretariat building is an art statement by itself *(Fig. 21).*

*Fig 21. Entrance canopy*

*(Marcel Breuer Digital Archive, n.d.)*

## 7. Comparison of the three projects

All three discussed projects both difference and similarities in different aspects.

Starting form the scale of the projects. The success of his chair design even if as small as the project was acted as a trampoline for Breuer's career. It showed the world his sense of modernity and revolutionary thinking. It was very straight forward evidence of him embracing the new, ''the credo of ''machine civilization'' and the potential of industrial technology''(Gatje, 2000, p 9). This approach of deviating from the typical is evident also in the Geller House I. It is a slightly bigger project and yet again it sets a new standard, this time not in furniture design but in the layout of the modern American home. The biggest project – complex, is a perfect example of the modern approach towards design also evidently advertised by the school of Bauhaus – the unity. A clear collaboration between artists, architects and engineers is realised for the design of a complete whole.

Nevertheless, the use of materials also changes throughout Breuer's work – light and strong tubes used for the furniture and natural materials for the design of the house. The meeting point between the those is the focus on comfort and affordability, thus, easier production. This also aligns with the use of massive concrete fabricated elements for the UNESCO Headquarters.

Apart form design, presentation also says a lot about a designer's approach towards architecture. Even though Breuer was not the best in selling himself as an architect, his defence of his ideas has been remarkable: ''He frequently cloaked his argument in favour of a particular or form in functional justification''(Gatje, 2000, p 47). From this a conclusion could be made that Breuer's work was highly valued exactly because of the combination of aesthetics and functionality, a key element of the modern design.

# 8. Conclusion – mass production and craftsmanship nowadays

In conclusion, the work of Breuer will be related to the modern tendencies in architecture. A comparison between his approach towards architecture influenced by the Bauhaus craftsmanship, on the one hand, and modern industrialization, on the other hand, will be made.

Therefore, in order to discuss the current situation, a reference to the past is made. The evolution of Marcel Breuer's work could be related to the changes in design approach happening today and what could come next.

## 8.1 The echo of Bauhaus

Going back to the Bauhaus principles which sit in the core of Breuer's architectural approach the appreciation of the craft work is embedded. This can be seen in Lajko's way of working. He is described as a very ''intuitive designer'' who ''spent most of his time in developing the details'' (Gatje, 2000, p 25). This is an evident approach of the craftsman, by paying attention to detail but also by focusing on how to realise the idea rather than on the idea itself.

What is still present from the craft appreciation today can be seen in the Bauhaus course program discussed earlier in the paper (*Fig1.* ,p.8). It would be interesting to point out that many of subjects are still present in the architectural academic programs. Studies such as construction principles, appearance, study of the materials and even the work with wood in the workshop. Furthermore, drawing, style and work with colour are also a part of architecture courses.

Unfortunately, those subjects are not as united as before and are thought on two different grounds – technical universities and architecture schools, art academies. Architecture is studied in technical universities alongside engineers and is still called a form of art. It is also studied in a art academies and is still perceived as an engineering discipline. This is evident for the paradox nature of discipline and the architect who is at the end both an artist and an engineer.

## 8.2 The situation nowadays

With industrialization, the mass-produced elements are widely spread and embraced by designers all over the world and craftsmanship is removed from focus. The economical, political, and social situation promotes the easier, cheaper and more precise production. Yet the design quality is neglected.

Looking at the situation today, mass production is fully embraced. However, it frequently becomes the reason for generalisation and starts deviating from the craftsmanship so much that poses the question, are the virtues, meaning and value of the crafted product lost in machine process?

Bauhaus encourages to always seek to achieve the balance between function and aesthetics. And if before Bauhaus, the focus has been more on decoration and beauty (Art Nouveau, Renaissance) now it could be said that the use of technologies and embrace of simplistic design approach has inclined the balance towards functionality. In order to both save the uniqueness and tradition of the craft but also the convenience of machine production we should go back into seeking the balance by incorporating both artistic and engineering beauty into a functional design by always searching for a new perspective.

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## Image credits

Fig 1 – Burkay Pasin (2017) Rethinking the Design Studio-Centered ArchitecturalEducation. A Case Study at Schools of Architecture in Turkey, The Design Journal, 20:sup1,S1270-S1284, Retrieved from: http://dx.doi.org/10.1080/14606925.2017.1352656

Fig 2 – Werkstattgebäude mit Verbindungsgang – Marcel Breuer Digital Archive. (n.d.). Breuer.syr.edu. Retrieved April 16, 2023, from: https://breuer.syr.edu/xtf/view?docId=mets/28747.mets.xml

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Fig 5 – Werkstattgebäude Hofseite – Marcel Breuer Digital Archive. (n.d.). Breuer.syr.edu. Retrieved April 20, 2023, from https://breuer.syr.edu/xtf/view?docId=mets/28748.mets.xml

Fig 6 – Slatted Chair ti 1a. (n.d.). Www.bauhauskooperation.com. https://www.bauhauskooperation.com/knowledge/the-bauhaus/works/joinery/slatted-chair-ti-1a/

Fig 7 – Breuer Metallmöbel – Marcel Breuer Digital Archive. (n.d.). Breuer.syr.edu. https://breuer.syr.edu/xtf/view?docId=mets/25264.mets.xml

Fig 8 – Geller House, Lawrence, L.I. 1944-45 – Marcel Breuer Digital Archive. (n.d.). Breuer.syr.edu. Retrieved April 20, 2023, from https://breuer.syr.edu/xtf/view?docId=mets/666.mets.xml

Fig 9 – Sketch No. 183 – Marcel Breuer Digital Archive. (n.d.). Breuer.syr.edu. Retrieved April 20, 2023, from https://breuer.syr.edu/xtf/view?docId=mets/36244.mets.xml

Fig 10 – Geller House, Lawrence, Long Island. Designed by Marcel Breuer, Architect. – Marcel Breuer Digital Archive. (n.d.). Breuer.syr.edu. Retrieved April 20, 2023, from https://breuer.syr.edu/xtf/view?docId=mets/11216.mets.xml

Fig 11 – Geller House, Lawrence, Long Island. Designed by Marcel Breuer, Architect. – Marcel Breuer Digital Archive. (n.d.). Breuer.syr.edu. Retrieved April 20, 2023, from https://breuer.syr.edu/xtf/view?docId=mets/11216.mets.xml

Fig 12 – Geller House, Lawrence, Long Island. Designed by Marcel Breuer, Architect. – Marcel Breuer Digital Archive. (n.d.). Breuer.syr.edu. Retrieved April 20, 2023, from https://breuer.syr.edu/xtf/view?docId=mets/11216.mets.xml

Fig 13 – Geller House, Lawrence, Long Island. Designed by Marcel Breuer, Architect. – Marcel Breuer Digital Archive. (n.d.). Breuer.syr.edu. Retrieved April 20, 2023, from https://breuer.syr.edu/xtf/view?docId=mets/11216.mets.xml

Fig 14 – Geller House, Lawrence, Long Island. Designed by Marcel Breuer, Architect. – Marcel Breuer Digital Archive. (n.d.). Breuer.syr.edu. Retrieved April 20, 2023, from https://breuer.syr.edu/xtf/view?docId=mets/11216.mets.xml

Fig 15 – Geller House, Lawrence, Long Island. Designed by Marcel Breuer, Architect. – Marcel Breuer Digital Archive. (n.d.). Breuer.syr.edu. Retrieved April 20, 2023, from https://breuer.syr.edu/xtf/view?docId=mets/11216.mets.xml

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Fig 17 – Gatje, R. F. (2000). Marcel Breuer.

Fig 18 – Construction Set: Architectural – Marcel Breuer Digital Archive. (n.d.). Breuer.syr.edu. Retrieved April 20, 2023, from https://breuer.syr.edu/xtf/view?docId=mets/716.mets.xml

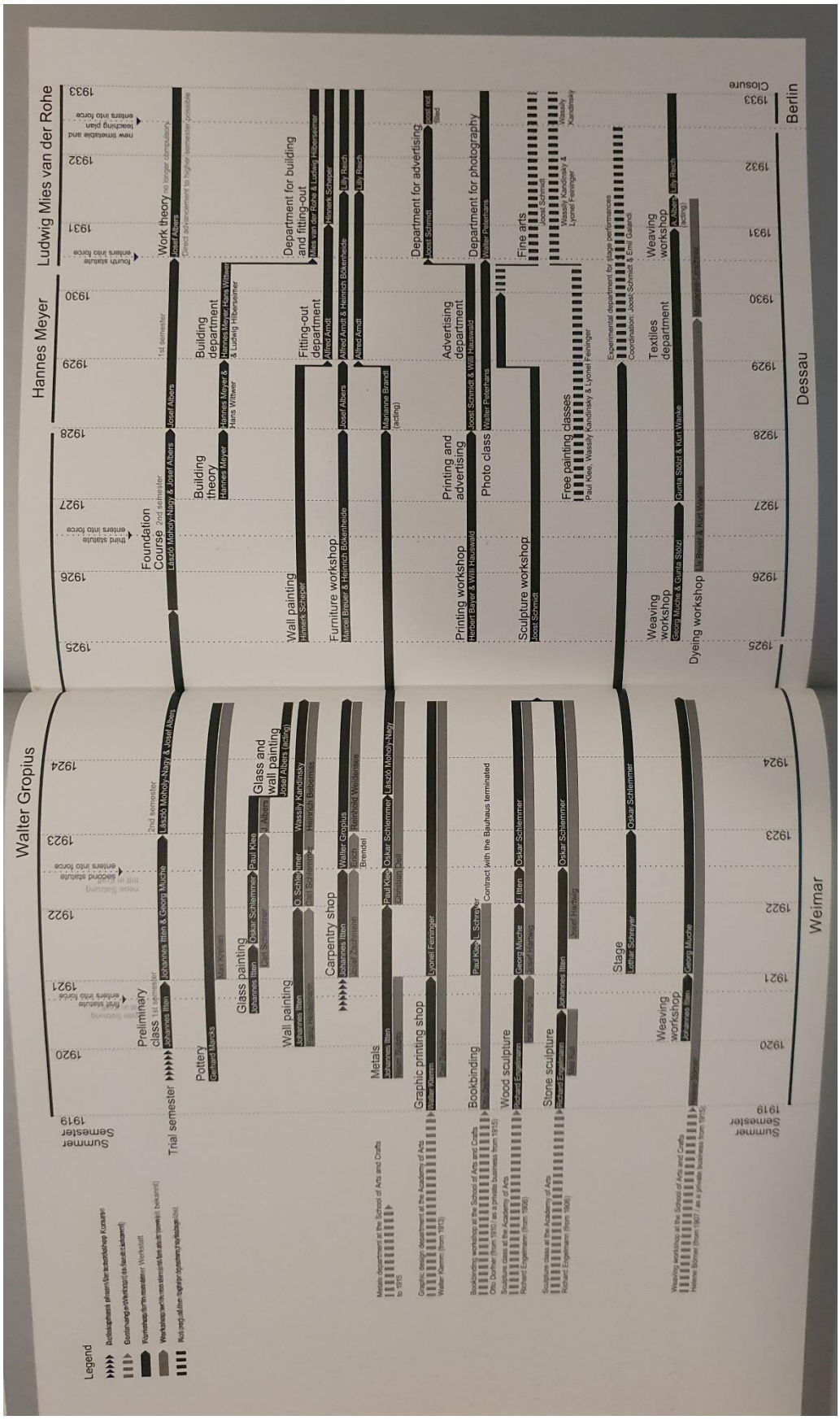
Fig 19 – Perspective Rendering – Marcel Breuer Digital Archive. (n.d.). Breuer.syr.edu. Retrieved April 20, 2023, from https://breuer.syr.edu/xtf/view?docId=mets/903.mets.xml

Fig 20 – Aspen Health Center: Detail of Walls and Roof – Marcel Breuer Digital Archive. (n.d.). Breuer.syr.edu. Retrieved April 20, 2023, from https://breuer.syr.edu/xtf/view?docId=mets/29400.mets.xml

Fig 21 – Marcel Breuer Digital Archive. (n.d.). Breuer.syr.edu. https://breuer.syr.edu/project.php?id=407

# Appendices

## Appendix I : Bauhaus workshops timeline

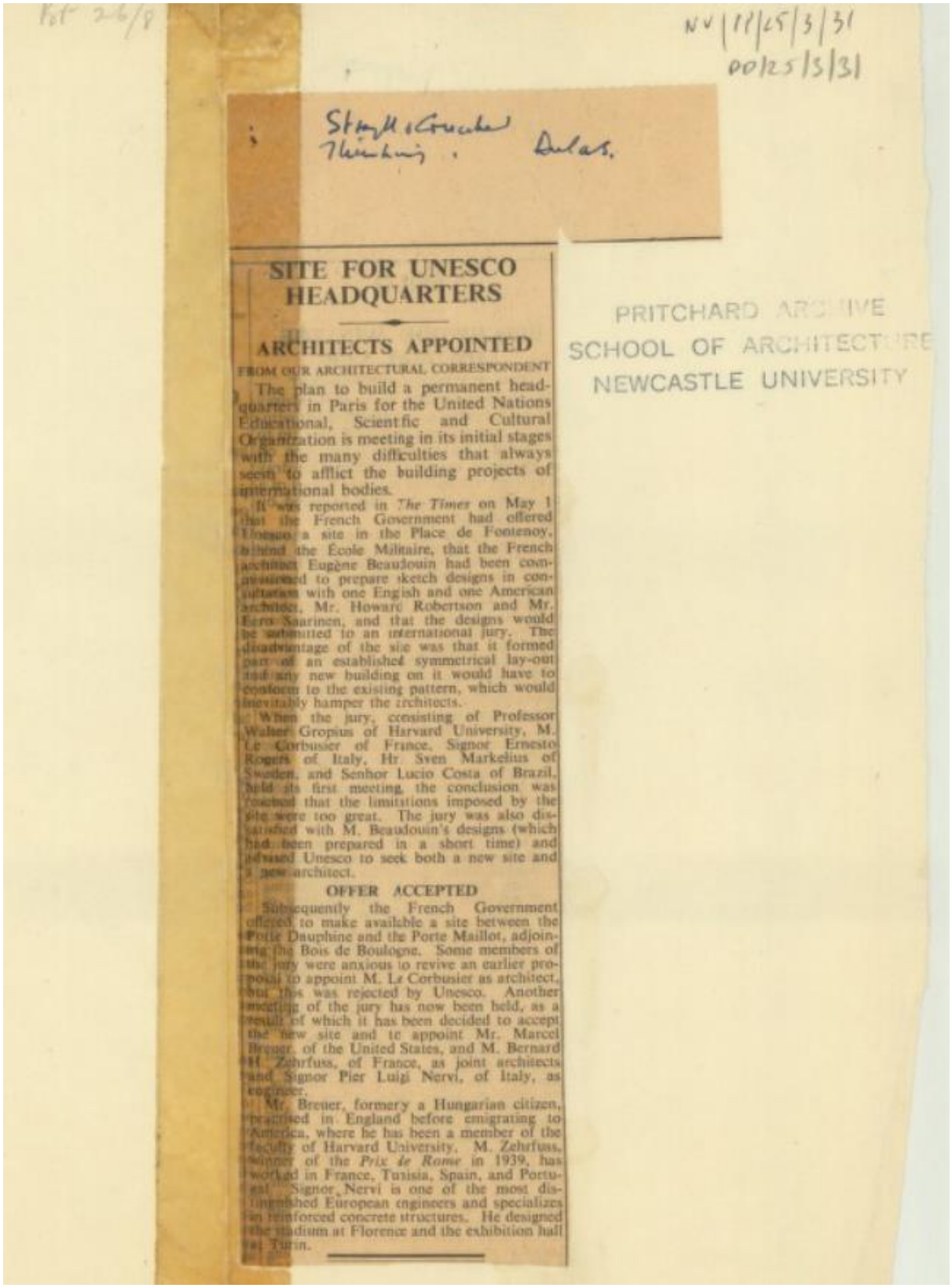



(Cowper et al., 2019)

Appendix II : Advertisement for The Barrett Division featuring the Geller House


(Advertisement for the Barrett Division Featuring the Geller House – Marcel Breuer Digital Archive, n.d.)

Appendix III: Site for UNESCO Headquarters Architects Appointed



SITE FOR UNESCO HEADQUARTERS

ARCHITECTS APPOINTED

FROM OUR ARCHITECTURAL CORRESPONDENT

The plan to build a permanent headquarters in Paris for the United Nations Educational, Scientific and Cultural Organization is meeting in its initial stages with the many difficulties that always seem to afflict the building projects of international bodies.

It was reported in *The Times* on May 1 that the French Government had offered Unesco a site in the Place de Fontenoy, behind the École Militaire, that the French architect Eugène Beaudouin had been commissioned to prepare sketch designs in consultation with one English and one American architect, Mr. Howard Robertson and Mr. Eero Saarinen, and that the designs would be submitted to an international jury. The disadvantage of the site was that it formed part of an established symmetrical lay-out and any new building on it would have to conform to the existing pattern, which would inevitably hamper the architects.

When the jury, consisting of Professor Walter Gropius of Harvard University, M. Le Corbusier of France, Signor Ernesto Rogers of Italy, Hr Sven Markelius of Sweden, and Senhor Lucio Costa of Brazil, held its first meeting the conclusion was reached that the limitations imposed by the site were too great. The jury was also dissatisfied with M. Beaudouin's designs (which had been prepared in a short time) and advised Unesco to seek both a new site and a new architect.

OFFER ACCEPTED

Subsequently the French Government offered to make available a site between the Porte Dauphine and the Porte Maillot, adjoining the Bois de Boulogne. Some members of the jury were anxious to revive an earlier proposal to appoint M. Le Corbusier as architect, but this was rejected by Unesco. Another meeting of the jury has now been held, as a result of which it has been decided to accept the new site and to appoint Mr. Marcel Breuer, of the United States, and M. Bernard Zehrfuss, of France, as joint architects and Signor Pier Luigi Nervi, of Italy, as engineer.

Mr. Breuer, formerly a Hungarian citizen, practised in England before emigrating to America, where he has been a member of the faculty of Harvard University. M. Zehrfuss, winner of the *Prix de Rome* in 1939, has worked in France, Tunisia, Spain, and Portugal. Signor Nervi is one of the most distinguished European engineers and specializes in reinforced concrete structures. He designed the stadium at Florence and the exhibition hall at Turin.



(Site for UNESCO Headquarters Architects Appointed – Marcel Breuer Digital Archive, n.d.)